

## Online Supplemental material

### Supplemental Method 1: Mixed-effects models

To estimate changes in consumption of 23 food groups over time, mixed-effects models for repeated measurements were employed. The general model for each food group was specified as:

$$Y_{ij} = \beta_0 + \beta_1 T_{ij} + \beta_2 S_i + \beta_3 A_i + \beta_4 E_{ij} + \beta_5 (T_{ij} \times S_i) + \beta_6 T_{ij}^2 + \mu_i + \varepsilon_{ij}$$

Where:

$Y_{ij}$ : Food group consumption for subject  $i$  at time point  $j$ .

$T_{ij}$ : Time variable (fixed effect) for subject  $i$  at time point  $j$

$S_i$ : Sex (fixed effect) for subject  $i$

$A_i$ : Age at baseline (fixed effect) for subject  $i$

$E_{ij}$ : Total energy intake (repeated measure) for subject  $i$  at time point  $j$

$\mu_i$ : Random effects for subject  $i$ , including at least random intercept and slope

$\varepsilon_{i,j}$ : Residual error term for subject  $i$  at time point  $j$

Time was modelled to serve both as a fixed effect, capturing the average effect across the entire population, and as a random effect, accounting for individual variability in the temporal trajectory.

An interaction term between time and gender was added to estimate the potential differences in evolution trajectories between men and women. The polynomial term  $\text{Time}^2$  was introduced to capture potential non-linearity in the trajectory. The spatial power law  $\text{SP(POW)}(\text{time})$  of the SAS MIXED procedure was utilized to model the correlation structure of repeated measures, due to variations in correlation over time, attributed to the inconsistent time intervals between successive questionnaires. For random effects, various structures for the variance-covariance matrix were explored, and the optimal one (unstructured) was chosen.

In the second part of our analysis, which focuses on examining socioeconomic factors associated with the consumption of four food groups, namely red meat, processed meats, legumes, and wholegrain products, we utilized mixed-effects models similar to those employed earlier, incorporating the relevant covariates as follows:

$$Y_{ij} = \beta_0 + \beta_1 T_{ij} + \beta_2 S_i + \beta_3 A_i + \beta_4 E_{ij} + \beta_5 Ed_i + \beta_6 O_i + \beta_7 I_i + \beta_8 (T_{ij} \times S_i) \\ + \beta_9 (T_{ij} \times Ed_i) + \beta_{10} (T_{ij} \times I_i) + \beta_{11} (T_{ij} \times O_i) + \beta_{12} T_{ij}^2 + \mu_i + \varepsilon_{ij}$$

Where additional terms include:

Ed<sub>i</sub>: Education level at baseline (fixed effect) for subject i

O<sub>i</sub>: Occupational status at baseline (fixed effect) for subject i

I<sub>i</sub>: Income at baseline (fixed effect) for subject i

Interaction terms between each of the covariates and time were incorporated into the model to capture their impact on consumption over time.

Similar mixed-effects models were utilized to model the trajectory of each of the the cDQI indicator, and its two components, the aDQI and the pDQI, as follows:

$$cDQI_{i,j} = \beta_0 + \beta_1 T_{i,j} + \beta_2 S_i + \beta_3 E_{i,j} + \beta_4 (T_{i,j} \times S_i) + \mu_i + \varepsilon_{i,j}$$

**Supplemental Table 1: Sociodemographic Characteristics Across Study Waves<sup>1,2,3</sup>**

	2014	2018 Resp.	2018 Non-resp.	P	2022 Resp.	2022 Non-resp.	P	2014_2018_ 2022 Resp.	2014_2018_ 2022 Non-resp.	P
Unweighted n	17,187	15,548	1,639		10,734	6,453		9,095	8,092	
<b>Sex</b>				<0.0001			0,10			0,10
Women	52.36	53.07	46.8		51.81	53.1		53.05	51.76	
Men	47.64	46.93	53.2		48.19	46.9		46.95	48.24	
<b>Age</b>	48.38 (15.97)	48.48 (16.02)	47.59 (15.47)	<0.0001	49.44 (14.43)	49.94 (18.13)	<0.0001	49.90 (14.19)	47.07 (17.63)	<0.0001
<b>Education level</b>				0.0008			<0.0001			<0.0001
Primary	59.92	59.88	60.21		61.96	57.15		62.39	57.8	
Secondary	15.19	15.52	12.63		12.38	19.01		12.32	17.65	
Post-secondary	24.89	24.6	27.16		25.66	23.85		25.29	24.55	
<b>Occupational position</b>				<0.0001			<0.0001			<0.0001
Self-employed/farmer	4.45	4.6	3.22		3.91	5.17		4.08	4.76	
Managerial staff/intellectual profession	9.10	8.69	12.26		10.74	6.87		10.36	8.02	
Unemployed	8.85	9.34	5.04		11.46	5.29		13.05	5.24	
Employee. manual worker	31.19	30.52	36.3		28.67	34.59		26.78	34.96	
Students	4.49	4.34	5.74		2.67	6.98		1.91	6.72	
Intermediate professions	14.50	13.94	18.83		15.1	13.68		14.18	14.77	
Retired	27.42	28.56	18.6		27.44	27.41		29.63	25.54	
<b>Monthly income per household unit</b>				<0.0001			<0.0001			<0.0001
NA	6.58	6.83	4.65		6.44	6.77		6.88	6.32	
< 1200€/C.U.	24.42	25.27	17.87		24.44	24.4		26.07	23.01	
1200 - 1800€/ C.U.	30.91	29.16	44.51		29.13	33.33		25.33	35.7	
1800 - 2700€/ C.U.	23.39	23.84	19.91		23.54	23.19		24.44	22.5	
>2700€/ C.U.	14.70	14.91	13.07		16.46	12.31		17.29	12.47	
<b>Place of residence</b>				<0.0001			<0.0001			<0.0001
Rural community	23.99	24.61	19.16		24.39	23.43		25.69	22.52	
Urban unit (<20,000 inhabitants)	18.63	19.29	13.4		18.62	18.64		19.91	17.53	
Urban unit (20,000 to 200,000 inhabitants)	16.80	16.3	20.77		15.92	18		14.73	18.59	
Urban unit (>200,000 inhabitants)	40.58	39.8	46.67		41.06	39.93		39.68	41.36	

Abbreviations: C.U., consumption unit; Resp., respondents ; Non-resp., Non- respondents.

<sup>1</sup>Values are mean (SD) or % as appropriate, all data are weighted.

<sup>2</sup>P-values, calculated using ANOVA or Chi<sup>2</sup> test, indicate the significance of the differences between respondents and non-respondents for each wave of the study.

**Supplemental Table 2: Parameters of the mixed-effects models modeling the evolution trajectories of food groups (2014 to 2022), n = 17,187, NutriNet-**

Food groups	Intercept	Age	TEI	Time	Sex (Men vs Women)	Time x Sex	Time x Time
Alcohol	-38.22 (-48.25;-28.19)	1.18 (1.03;1.33)	0.03 (0.03;0.03)	-9.03 (-14.22;-3.84)	102.44 (96.5;108.39)	-5.81 (-7.95;-3.67)	1.3 (-0.01;2.6)
Animal substitutes	10.23 (2.39;18.06)	-0.33 (-0.43;-0.23)	0.02 (0.01;0.02)	10.32 (4.86;15.77)	-10.95 (-15.45;-6.45)	-1.03 (-3.08;1.03)	-1.72 (-3.1;-0.35)
Butter	-9.14 (-9.68;-8.6)	0.03 (0.02;0.04)	0 (0;0)	7.91 (7.49;8.32)	-0.79 (-1.1;-0.47)	0.48 (0.32;0.65)	-1.6 (-1.71;-1.5)
Dairy products	1.5 (-9.67;12.66)	0.58 (0.43;0.73)	0.09 (0.08;0.09)	-0.69 (-7.92;6.54)	-61.27 (-68.16;-54.38)	8.44 (5.65;11.23)	-1.85 (-3.66;-0.03)
Eggs	-9.31 (-10.49;-8.13)	0.1 (0.09;0.11)	0 (0;0.01)	7.16 (6.22;8.1)	-2.3 (-2.93;-1.67)	-0.11 (-0.44;0.22)	-1.24 (-1.48;-1)
Fish	-10.07 (-13.28;-6.87)	0.46 (0.42;0.5)	0.02 (0.02;0.02)	-3.52 (-5.76;-1.28)	-0.77 (-2.73;1.18)	-0.44 (-1.25;0.37)	0.61 (0.05;1.18)
Fruit juice	95.53 (87.45;103.61)	-0.51 (-0.6;-0.42)	0.02 (0.02;0.02)	-31.54 (-37.39;-25.69)	10.72 (4.33;17.1)	0.89 (-1.94;3.71)	3.68 (2.22;5.14)
Fruits	-221.42 (-241.22;-201.63)	4.06 (3.84;4.28)	0.13 (0.13;0.13)	67.3 (51.45;83.15)	-90.26 (-102.2;-78.32)	-7.6 (-12.46;-2.75)	-14.37 (-18.34;-10.39)
Hot drinks	432.4 (384.52;480.29)	2.94 (2.5;3.39)	0.1 (0.09;0.11)	81.3 (36.39;126.21)	-159.98 (-178.98;-140.98)	11.56 (2.91;20.21)	-20.54 (-31.82;-9.27)
Legumes	3.09 (0.66;5.53)	-0.23 (-0.26;-0.2)	0.01 (0.01;0.01)	8.68 (6.76;10.59)	1.5 (0.03;2.97)	-0.16 (-0.83;0.5)	-1.71 (-2.19;-1.23)
Milk	54.05 (43.4;64.7)	-0.37 (-0.5;-0.24)	0.03 (0.03;0.03)	-50.06 (-57.74;-42.39)	1.76 (-4.71;8.23)	0.84 (-2.02;3.71)	11.48 (9.55;13.41)
Nuts	-11.54 (-12.99;-10.1)	0.03 (0.01;0.05)	0.01 (0.01;0.01)	8.79 (7.81;9.76)	-4.45 (-5.31;-3.6)	-0.63 (-1.05;-0.2)	-1.52 (-1.76;-1.27)
PMD	18.21 (15.71;20.71)	-0.45 (-0.48;-0.42)	0.02 (0.02;0.02)	3.59 (1.81;5.37)	4.24 (2.21;6.28)	0.44 (-0.55;1.43)	-0.33 (-0.77;0.11)
Plant-based fat	-3.76 (-5.39;-2.12)	0.08 (0.06;0.1)	0.02 (0.02;0.02)	0.6 (-0.69;1.88)	-9.13 (-10.05;-8.22)	-0.07 (-0.52;0.37)	0.07 (-0.26;0.39)
Potatoes	-0.97 (-2.67;0.73)	0.07 (0.05;0.09)	0.01 (0.01;0.01)	-5.85 (-7.13;-4.57)	7.74 (6.72;8.77)	0.08 (-0.42;0.57)	1.5 (1.18;1.82)
Poultry	18.62 (16.5;20.74)	-0.24 (-0.27;-0.22)	0.01 (0.01;0.01)	-2.91 (-4.56;-1.26)	0.41 (-0.88;1.71)	0.32 (-0.31;0.95)	0.3 (-0.12;0.71)
Processed meat	-15.15 (-16.97;-13.33)	-0.14 (-0.16;-0.12)	0.01 (0.01;0.01)	23.16 (21.76;24.55)	-0.36 (-1.34;0.61)	3.19 (2.71;3.68)	-5.28 (-5.63;-4.93)
Red meat	2.72 (-0.76;6.21)	0.22 (0.17;0.26)	0.03 (0.03;0.03)	-17.54 (-20;-15.09)	12.94 (10.66;15.22)	0.52 (-0.51;1.55)	2.95 (2.34;3.57)
Refined cereals	104.36 (98.07;110.64)	-1.27 (-1.35;-1.19)	0.05 (0.05;0.05)	-25.81 (-30.2;-21.43)	30.45 (26.47;34.43)	-0.83 (-2.58;0.92)	3.66 (2.56;4.76)
SSFF	17.9 (13.97;21.83)	-0.3 (-0.35;-0.25)	0.04 (0.04;0.04)	-8 (-10.66;-5.33)	4.87 (2.48;7.26)	1.54 (0.48;2.6)	2.18 (1.51;2.85)
Sweet drinks	57 (48.22;65.79)	-0.85 (-0.94;-0.77)	0.02 (0.02;0.02)	-10.29 (-17.92;-2.67)	2.99 (-1.83;7.81)	2.69 (0.61;4.76)	1.47 (-0.45;3.38)
Vegetables	-74.64 (-91.21;-58.06)	3.06 (2.87;3.25)	0.13 (0.12;0.13)	39.42 (26.57;52.27)	-75.06 (-85.65;-64.48)	-2.99 (-8.47;2.5)	-8.02 (-11.25;-4.79)
Wholegrain products	-4.49 (-10.95;1.96)	-0.04 (-0.11;0.04)	0.04 (0.04;0.04)	-7.84 (-12.75;-2.94)	-10.16 (-13.94;-6.38)	2.14 (0.48;3.8)	2.42 (1.19;3.65)

**Santé Study<sup>1,2</sup>**

<sup>1</sup>Abbreviations: TEI, Total energy intake over time; SSFF, Sweetened / Salty and Fatty Foods; PMD, Prepared and Mixed Dishes.

<sup>2</sup>Values are of the  $\beta$ -coefficients (95% CI) of the mixed-effects models of the evolution trajectories of food groups. Models have been adjusted for sex, age and TEI.

**Supplemental Table 3: Food group consumption over time (2014 to 2022), n = 17,187, NutriNet-Santé Study<sup>1,2</sup>**

Food groups	Whole sample			Men			Women		
	2014	2018	2022	2014	2018	2022	2014	2018	2022
<b>Processed meat</b>	21.59 (21.27;21.92)	29.4 (28.99;29.81)	29.1 (28.63;29.58)	22.37 (21.81;22.93)	33.18 (32.48;33.89)	32.86 (32.05;33.66)	20.82 (20.47;21.16)	25.62 (25.18;26.05)	25.35 (24.84;25.87)
<b>Legumes</b>	16.47 (15.97;16.97)	18.96 (18.47;19.46)	20.03 (19.53;20.53)	17.19 (16.33;18.05)	19.29 (18.43;20.15)	20.47 (19.62;21.33)	15.75 (15.22;16.27)	18.64 (18.12;19.16)	19.59 (19.05;20.13)
<b>Plant-based fat</b>	30.67 (30.38;30.97)	30.9 (30.54;31.25)	32.28 (31.88;32.68)	26.21 (25.70;26.72)	26.03 (25.42;26.64)	27.75 (27.07;28.42)	35.14 (34.82;35.45)	35.76 (35.39;36.14)	36.82 (36.39;37.25)
<b>SSFF</b>	78.98 (78.13;79.83)	80.17 (79.17;81.18)	81.33 (80.55;82.11)	81.61 (80.15;83.07)	84.56 (82.84;86.28)	85.22 (83.90;86.55)	76.36 (75.44;77.27)	75.79 (74.71;76.86)	77.43 (76.56;78.30)
<b>Fish</b>	47.88 (47.19;48.57)	47.82 (47.18;48.46)	45.22 (44.39;46.04)	47.17 (45.98;48.36)	47.27 (46.16;48.38)	44.13 (42.73;45.53)	48.59 (47.86;49.32)	48.37 (47.70;49.04)	46.3 (45.41;47.19)
<b>Potatoes</b>	24.98 (24.64;25.31)	24.66 (24.29;25.02)	25.18 (24.74;25.62)	28.71 (28.13;29.29)	28.83 (28.21;29.45)	29.08 (28.34;29.83)	21.25 (20.90;21.60)	20.48 (20.10;20.86)	21.28 (20.80;21.75)
<b>Poultry</b>	25.56 (25.15;25.97)	23.24 (22.80;23.68)	22.52 (21.94;23.10)	25.86 (25.15;26.57)	23.8 (23.04;24.56)	23.15 (22.18;24.13)	25.26 (24.83;25.69)	22.69 (22.23;23.15)	21.89 (21.27;22.52)
<b>PMD</b>	33.32 (32.57;34.06)	37.03 (36.59;37.48)	38.5 (37.99;39.01)	35.62 (34.38;36.86)	40.01 (39.30;40.72)	40.93 (40.12;41.74)	31.01 (30.19;31.84)	34.06 (33.54;34.58)	36.07 (35.44;36.70)
<b>Refined cereals</b>	125.85 (124.18;127.52)	110.54 (109.40;111.69)	102.77 (101.05;104.48)	140.7 (137.83;143.57)	125.51 (123.53;127.49)	117.25 (114.34;120.17)	110.99 (109.23;112.75)	95.58 (94.385;96.778)	88.28 (86.448;90.129)
<b>Alcohol</b>	128.16 (126.08;130.24)	122.1 (119.92;124.28)	112.9 (110.64;115.17)	176.03 (172.44;179.62)	167.08 (163.33;170.84)	153.95 (150.08;157.82)	80.29 (78.097;82.485)	77.12 (74.839;79.405)	71.86 (69.417;74.313)
<b>Butter</b>	3.47 (3.37;3.56)	7.15 (7.01;7.29)	6.923 (6.76;7.07)	3.25 (3.09;3.41)	7.47 (7.23;7.70)	7.12 (6.86;7.38)	3.68 (3.58;3.78)	6.84 (6.69;6.98)	6.72 (6.55;6.89)
<b>Sweet drinks</b>	43.01 (41.35;44.67)	38.23 (36.30;40.17)	36.63 (35.04;38.22)	46.23 (43.37;49.09)	43.29 (39.97;46.61)	42.49 (39.77;45.21)	39.79 (38.04;41.54)	33.18 (31.15;35.20)	30.77 (29.05;32.49)
<b>Wholegrain products</b>	68.01 (66.77;69.26)	70.38 (69.02;71.75)	72.64 (71.12;74.16)	64.72 (62.56;66.87)	67.17 (64.81;69.52)	71.09 (68.51;73.68)	71.31 (69.99;72.63)	73.6 (72.17;75.04)	74.18 (72.54;75.82)
<b>Fruit juice</b>	85.76 (83.86;87.66)	68.07 (66.35;69.79)	51.66 (50.10;53.22)	91.61 (88.35;94.88)	74.06 (71.11;77.01)	58.16 (55.50;60.82)	79.9 (77.90;81.91)	62.08 (60.28;63.88)	45.16 (43.47;46.84)
<b>Milk</b>	58.86 (56.62;61.09)	48.03 (45.67;50.40)	51.58 (47.40;55.77)	60.33 (56.47;64.18)	50 (45.93;54.08)	53.57 (46.47;60.67)	57.38 (55.02;59.75)	46.06 (43.58;48.55)	49.59 (45.11;54.07)
<b>Nuts</b>	8.4 (8.122;8.685)	11.49 (11.14;11.84)	13.38 (12.94;13.81)	5.898 (5.412;6.384)	8.32 (7.715;8.929)	10.22 (9.489;10.95)	10.9 (10.61;11.20)	14.66 (14.29;15.03)	16.53 (16.06;17.00)
<b>Eggs</b>	11.18 (10.99;11.37)	14.23 (13.94;14.52)	15.52 (15.20;15.85)	10.13 (9.807;10.45)	12.93 (12.44;13.43)	14.44 (13.89;14.98)	12.23 (12.03;12.43)	15.53 (15.22;15.83)	16.61 (16.26;16.96)
<b>Dairy products</b>	182.58 (180.45;184.72)	177.39 (174.70;180.07)	175.85 (173.38;178.32)	156.66 (152.97;160.35)	155.84 (151.23;160.45)	157.64 (153.44;161.85)	208.51 (206.25;210.76)	198.93 (196.12;201.74)	194.06 (191.39;196.73)

<b>Red meat</b>	61.36 (60.6;62.12)	54.09 (53.33;54.86)	49.87 (49.11;50.63)	67.63 (66.33;68.93)	61.54 (60.24;62.85)	56.47 (55.17;57.77)	55.09 (54.28;55.89)	46.65 (45.84;47.45)	43.27 (42.44;44.10)
<b>Animal substitutes</b>	26.11 (24.39;27.82)	32.21 (30.31;34.11)	31.78 (29.41;34.15)	22.22 (19.39;25.06)	25.23 (22.08;28.39)	26.28 (22.37;30.19)	29.99 (28.02;31.96)	39.19 (37.05;41.34)	37.28 (34.57;39.99)
<b>Vegetables</b>	351.79 (348.26;355.33)	358.51 (354.59;362.42)	365.73 (361.16;370.30)	312.92 (306.89;318.94)	315.04 (308.39;321.69)	324.38 (316.73;332.04)	390.66 (386.80;394.53)	401.98 (397.76;406.19)	407.07 (401.96;412.19)
<b>Hot drinks</b>	767.17 (758.20;776.14)	796.5 (787.69;805.30)	781.7 (770.72;792.68)	711.84 (696.90;726.78)	736.32 (721.68;750.96)	736.9 (718.70;755.11)	822.49 (812.32;832.67)	856.67 (846.72;866.62)	826.5 (814.00;839.00)
<b>Fruits</b>	276.40 (272.32;280.49)	293.65 (289.32;297.98)	288.37 (284.34;292.41)	229.9 (222.87;236.94)	238.11 (230.68;245.54)	235.33 (228.46;242.21)	322.9 (318.59;327.21)	349.18 (344.65;353.71)	341.42 (337.05;345.78)

<sup>1</sup>Abbreviations: SSFF, Sweetened / Salty and Fatty Foods; PMD, Prepared and Mixed Dishes.

<sup>2</sup>Values are the least squares means (CI) of adjusted consumptions (for sex, age and total energy intake).





Employee/manual worker	3.45 (-0.23;7.13)	0.07	1.01 (-0.62;2.64)	0.22	-2.05 (-4.49;0.38)	0.10	-16.34 (-22.76;-9.92)	< 0.0001
Intermediate professions	3.12 (-0.32;6.55)	0.07	1.5 (-0.02;3.02)	0.05	-2.55 (-4.82;-0.28)	0.02	-14.38 (-20.36;-8.39)	< 0.0001
Managerial staff/intellectual profession	1.37 (-1.84;4.59)	0.40	0.02 (-1.41;1.45)	0.97	-0.73 (-2.84;1.39)	0.50	-5.22 (-10.81;0.37)	0.07
Unemployed	-3.29 (-7.61;1.03)	0.13	-1.31 (-3.23;0.6)	0.18	2.37 (-0.51;5.25)	0.11	2.32 (-5.23;9.87)	0.55
Self-employed/farmer	2.86 (-5.56;11.28)	0.50	0.65 (-3.01;4.3)	0.73	-0.43 (-6.06;5.19)	0.88	3.38 (-11.35;18.1)	0.65
Students	-0.32 (-11.12;10.47)	0.95	-2.02 (-6.77;2.73)	0.40	4.75 (-2.46;11.96)	0.20	-11.04 (-29.94;7.86)	0.25
Retired	ref		ref		ref		ref	
<b>Time x Occupational status</b>								
Employee. manual worker	-0.93 (-2.38;0.51)	0.20	-0.66 (-1.42;0.09)	0.08	1.33 (0.28;2.39)	0.01	8.21 (5.54;10.89)	< 0.0001
Intermediate professions	-1.47 (-2.81;-0.13)	0.03	-0.88 (-1.58;-0.18)	0.01	2.02 (1.04;2.99)	< 0.0001	8.32 (5.84;10.81)	< 0.0001
Managerial staff/intellectual profession	-1.67 (-2.9;-0.43)	0.01	-0.89 (-1.54;-0.25)	0.01	1.16 (0.27;2.06)	0.01	6.34 (4.05;8.62)	< 0.0001
Unemployed	0.35 (-1.45;2.15)	0.70	0.16 (-0.78;1.11)	0.73	0.57 (-0.74;1.88)	0.40	1.02 (-2.31;4.36)	0.55
Self-employed/farmer	-2.43 (-5.88;1.01)	0.17	-0.73 (-2.52;1.07)	0.43	1.92 (-0.59;4.43)	0.13	-1.09 (-7.48;5.3)	0.74
Students	-3.68 (-8.08;0.72)	0.10	-2.9 (-5.21;-0.59)	0.01	1.52 (-1.71;4.74)	0.36	13.68 (5.49;21.87)	< 0.0001
Retired	ref		ref		ref		ref	
<b>Time x Time</b>	1.45 (0.84;2.06)	< 0.0001	-5.95 (-6.32;-5.59)	< 0.0001	-1.67 (-2.16;-1.17)	< 0.0001	4.19 (3;5.38)	< 0.0001

<sup>1</sup>Values are of the  $\beta$ -coefficients (95% CI) of the mixed-effects models of the evolution trajectories of food groups. Models have been adjusted for sex, age, TEI and socioeconomic variables (Income, education and occupational status).

<sup>2</sup>P-values are those of  $\beta$ -coefficients.

**Supplemental Table 5: Food group consumption over time (2014 to 2022) in each socioeconomic category, n = 17,187, NutriNet-Santé Study<sup>1</sup>**

	Red meat			Processed meat			Legumes			Wholegrain products		
	2014	2018	2022	2014	2018	2022	2014	2018	2022	2014	2018	2022
<b>Income</b>												
< 1200€/C.U.	57.00 (54.35;59.65)	50.85 (48.41;53.29)	47.07 (44.52;49.62)	21.85 (20.81;22.88)	29.10 (27.80;30.41)	28.81 (27.24;30.38)	19.43 (17.87;21.00)	22.46 (20.94;23.98)	23.95 (22.18;25.72)	64.93 (60.93;68.93)	71.16 (66.94;75.39)	69.59 (64.58;74.60)
1200 - 1800€/C.U.	61.74 (59.56;63.91)	53.45 (51.45;55.46)	49.08 (46.98;51.18)	22.22 (21.37;23.06)	30.14 (29.07;31.21)	29.04 (27.75;30.33)	17.59 (16.30;18.87)	20.98 (19.73;22.22)	22.35 (20.89;23.81)	66.96 (63.67;70.25)	70.98 (67.51;74.44)	72.66 (68.52;76.79)
1800 - 2700€/C.U.	61.88 (59.74;64.02)	54.39 (52.43;56.36)	50.32 (48.27;52.37)	21.39 (20.56;22.23)	29.02 (27.97;30.08)	28.25 (26.98;29.52)	17.51 (16.25;18.77)	19.41 (18.18;20.63)	22.31 (20.88;23.73)	68.10 (64.87;71.34)	71.67 (68.26;75.08)	73.49 (69.44;77.53)
>2700€/C.U.	64.24 (62.12;66.36)	55.77 (53.83;57.71)	51.42 (49.41;53.43)	21.01 (20.18;21.83)	28.35 (27.30;29.40)	28.41 (27.16;29.66)	15.95 (14.70;17.20)	19.11 (17.90;20.32)	20.94 (19.54;22.34)	64.03 (60.83;67.23)	69.77 (66.39;73.16)	73.77 (69.80;77.75)
<b>Education</b>												
Primary	65.65 (63.42;67.89)	57.03 (54.98;59.08)	52.41 (50.26;54.55)	22.31 (21.45;23.18)	30.00 (28.90;31.10)	29.66 (28.34;30.99)	16.76 (15.44;18.08)	17.92 (16.64;19.19)	20.41 (18.91;21.91)	60.63 (57.27;63.99)	65.70 (62.16;69.25)	67.57 (63.35;71.80)
Secondary	61.20 (58.80;63.60)	53.29 (51.09;55.49)	49.90 (47.60;52.20)	21.48 (20.55;22.41)	28.83 (27.65;30.02)	29.12 (27.70;30.54)	17.19 (15.77;18.61)	20.29 (18.91;21.66)	22.33 (20.73;23.94)	63.64 (60.02;67.26)	69.58 (65.76;73.40)	69.90 (65.36;74.44)
Post-secondary	57.66 (55.85;59.48)	49.25 (47.58;50.93)	44.99 (43.24;46.74)	20.58 (19.86;21.29)	27.92 (27.03;28.82)	27.39 (26.32;28.45)	17.85 (16.78;18.92)	21.73 (20.69;22.77)	23.01 (21.81;24.22)	69.55 (66.79;72.31)	74.78 (71.87;77.68)	75.99 (72.57;79.41)
<b>Occupational status</b>												
Employee/manual worker	64.90 (62.61;67.18)	56.45 (54.34;58.56)	52.70 (50.54;54.87)	22.64 (21.75;23.54)	29.95 (28.82;31.07)	30.40 (29.07;31.73)	15.32 (13.97;16.67)	17.55 (16.24;18.87)	20.39 (18.89;21.89)	57.41 (53.95;60.86)	66.33 (62.67;69.98)	68.86 (64.62;73.10)
Intermediate professions	63.48 (61.22;65.75)	55.09 (53.00;57.18)	50.60 (48.50;52.70)	23.04 (22.16;23.92)	29.83 (28.71;30.95)	30.36 (29.07;31.65)	15.54 (14.20;16.87)	18.74 (17.43;20.04)	21.13 (19.68;22.58)	58.87 (55.45;62.29)	69.31 (65.67;72.94)	72.48 (68.37;76.59)
Managerial staff/intellectual profession	61.22 (59.09;63.35)	52.96 (51.00;54.93)	48.34 (46.36;50.32)	21.35 (20.52;22.19)	28.47 (27.41;29.52)	28.67 (27.46;29.89)	16.32 (15.07;17.58)	19.19 (17.96;20.41)	20.42 (19.06;21.78)	66.81 (63.56;70.06)	73.40 (69.97;76.84)	76.24 (72.35;80.13)
Unemployed	59.22 (56.46;61.98)	52.27 (49.74;54.79)	49.54 (46.91;52.17)	20.82 (19.75;21.89)	29.31 (27.94;30.68)	29.25 (27.61;30.89)	18.63 (17.00;20.26)	21.32 (19.74;22.90)	22.02 (20.18;23.86)	68.63 (64.42;72.84)	69.83 (65.40;74.26)	70.02 (64.76;75.28)
Self-employed/farmer	62.49 (56.41;68.56)	52.45 (46.87;58.03)	48.94 (43.26;54.61)	22.98 (20.65;25.32)	30.56 (27.54;33.58)	31.25 (27.74;34.76)	17.22 (13.64;20.80)	19.63 (16.13;23.12)	22.35 (18.41;26.29)	66.78 (57.68;75.88)	66.27 (56.59;75.96)	60.05 (48.92;71.17)
Students	57.29 (49.96;64.61)	47.49 (40.74;54.25)	41.77 (34.31;49.24)	17.30 (14.44;20.16)	23.86 (20.26;27.47)	20.76 (16.15;25.37)	21.47 (17.16;25.79)	26.07 (21.87;30.27)	29.17 (23.93;34.42)	67.36 (56.33;78.40)	80.48 (68.83;92.12)	86.72 (71.93;101.5)
Retired	61.94 (60.33;63.55)	55.63 (54.13;57.13)	51.79 (50.25;53.33)	22.06 (21.41;22.71)	30.46 (29.68;31.24)	30.37 (29.47;31.27)	16.36 (15.41;17.31)	17.34 (16.42;18.26)	17.95 (16.92;18.98)	66.38 (63.90;68.86)	64.53 (61.96;67.10)	63.71 (60.78;66.64)

<sup>1</sup>Values are the least squares means (CI) of adjusted consumptions (for sex, age, total energy intake, education, income and occupational status).

**Supplemental Figure 1: Selection of the study sample**

